Task Force on the Future of the Canadian Financial Services Sector

Ownership Restrictions and the Value of Canadian Bank Stocks

by
Gerald Garvey and
Ron Giammarino
University of British Columbia

September 1998

Research Paper Prepared for the Task Force on the Future of the Canadian Financial Services Sector

Task Force on the
Future of the
Canadian Financial
Services Sector

Ownership Restrictions and the Value of Canadian Bank Stocks

by
Gerald Garvey and
Ron Giammarino
University of British Columbia

September 1998

Research Paper Prepared for the Task Force on the Future of the Canadian Financial Services Sector

The views expressed in these research papers are those of the authors and do not necessarily reflect the views of the Task Force on the Future of the Canadian Financial Services Sector

Cat No.: BT22-61/3-1998E-3
ISBN 0-662-27158-0

For additional copies of
this document please contact:
Distribution Centre
Department of Finance
300 Laurier Avenue West
Ottawa K1A 0G5

Telephone: (613) 995-2855
Facsimile: (613) 996-0518

Also available through the Internet at
http://finservtaskforce.fin.gc.ca

Cette publication est également disponible en français.

Table of Contents

Executive Summary

We evaluate the effects of current ownership restrictions on the value of Canadian Bank stocks. In particular, we consider the possibility that the ownership restrictions currently in place depress values and raise the cost of capital for Canadian Banks relative to their international competitors.

The original intent of the ownership restrictions seems to have been the prevention of American ownership of the major Canadian Banks. This can influence share value through three channels. First, it is conceivable that some segment of the capital market is unable or unwilling to hold shares of Canadian Banks because of the ownership restriction. If true, this implies that the market for Canadian Bank Stock is segmented with the attendant possibility that the cost of capital is higher. Second, the prevention of concentrated ownership effectively blocks take-overs. The absence of a take-over possibility may reduce expected future cash flows and, as a result, reduce current market value. Third, the prevention of concentrated ownership may discourage costly monitoring. The cost of monitoring is paid by the monitor while the benefits are shared with all shareholders. It is possible, then, that some types of monitoring are not attractive when shareholdings are relatively low.

In summary our overall conclusion is that there is no direct evidence that the shares of Canadian Banks are systematically undervalued relative to US banks. Despite this, indirect evidence on monitoring and the value of control suggest that ownership restrictions can be harmful to shareholder value. More detailed conclusions follow.

1. The basic question of whether or not Canadian Banks stocks are in fact relatively low is difficult to answer as we need a standard for comparison. The most commonly used standard is the price/earnings (P/E) ratio. Moreover, it has been argued that evidence of higher cost of capital can be found in lower price/earnings (P/E) ratios for Canadian banks relative to those of US Banks. We examine this argument and the relevant empirical evidence generated over the past 10 years. We find that both theory and evidence is weak. Theoretically, statements relating P/E ratios to cost of capital involve a great number of restrictive assumptions that typically do not hold. Empirically we find that we cannot reject the hypothesis that the P/E ratios of Canadian banks are no lower than those of US banks.

2. We evaluate the argument that the cost of capital for Canadian Banks is higher because ownership restriction results in a segmented capital market. We are not aware of theoretical support of this hypothesis and find that an empirical evaluation of the hypothesis is hampered by the small number of Canadian Banks. Although these caveats make our results somewhat tentative, we are unable to reject the hypothesis that Canadian bank shares trade in an integrated market so that their cost of capital is not higher due to the ownership restriction.

3. Ownership restrictions affect value through two other closely related channels; takeover prospects and the value of voting rights. We present evidence that restrictions on takeovers could well depress bank stock prices, and are particularly likely to do so when banks are seen as take-over targets rather than potential bidders. This conclusion is buttressed by a study of recent proposed changes to merger regulation in Australia. Since take-overs are typically motivated by control of the firm, they are essentially purchases of votes. We turn to direct estimates of the value of a vote, based on the premium observed for superior voting stock on the Toronto Stock Exchange. We conclude that the typical premium, which is estimated for industrial firms could be as large as 10%. Again, this conclusion relates to banks that are likely to be absorbed by other banks rather than vice versa.

4. Large, activist shareholders are undoubtedly impeded by ownership restrictions. We summarise evidence from the US that such shareholders do not, on average, exert a substantial effect on firm value. However, there are important cases in which a large and vocal shareholder has triggered needed changes. We present a case, previously covered only in the local business press, where an individual had just this effect on a major Australian bank in the early 1990's, and indicate how he might have been impeded by the ownership restrictions that apply in that country.

1. Overview

The purpose of our study is to examine the ways in which ownership restrictions on Canadian Banks affect the value of Bank shares. The specific restriction we consider is contained in the Bank Act and requires that no more than 10% of the ownership of a Schedule I bank be held by any one person or group of individuals acting in concert.

Since schedule I banks employ about 195,000 people and account for more than 90% of the assets of the banking system and 65% of the assets of all deposit taking institutions, any regulations that affect these institutions are directly relevant to the financial services sector and hence to the general mandate of the Task Force.

More specifically, by examining the effect that these restrictions have on the value of bank stocks we address parts of several particular questions raised by the Task Force in addressing their mandate[1]:

- (1) *What is the ideal regulatory and public policy framework for our financial services sector?* The evaluation of a regulatory regime that includes ownership restrictions must include an assessment of the wealth cost of the restrictions.

- (16) *To what extent do the structural restrictions support, and to what extent to they detract from efficient competition and other policy objectives in the financial services sector*? Perhaps the main concern that we have heard is that ownership restrictions raise the cost of capital for Canadian banks. If this is the case, it implies that Canadian Banks will be at a competitive disadvantage relative to their international competitors.

- (17) *Should the rules surrounding schedule II banks be relaxed*? Since the primary distinction between schedule I and schedule II banks is the ownership restrictions, the importance of those restrictions is critical to decisions made regarding changes in these rules.

- (18) *To what extent should regulation reflect a policy against commercial links and against outside control by a shareholder other than a financial institution?* The answer to the part of this question that relates to outside control will be based on a comparison of costs and benefits of such a restriction. The wealth cost (through the value of equity) that we examine is potentially one of the costs.

- (19) *To what extent should concern with foreign control lend support to the ownership rules in their existing or some modified form?* The exclusion of foreign control comes at some cost and part of the cost will be reflected in share values.

---

[1] The number in parenthesis refers to the question number used in the Task Forces' discussion paper.

In the remainder of this chapter we provide background and a framework for our study. In the next section we look at the origins of the current Canadian restrictions and compare Canadian restrictions to restrictions found elsewhere. As we later rely heavily on a recent Australian incident we discuss Australian regulations in some detail. In section 1.3 we provide the conceptual framework we use to study the value of Canadian shares.

Regulation in Canada and Elsewhere

The prohibition of a significant shareholder of Canadian Banks originated with the Mercantile Bank Affair [2] of the mid 1960's. In 1963 the Mercantile Bank of Canada, a wholly owned subsidiary of the National Handelsbank of Holland was offered for sale and, as a result, Citibank entered into an agreement to purchase the bank. The Minister of Finance at the time, Walter Gordon, had previously and throughout the Mercantile affair made his negative views towards US ownership well known. He was chairman of a Royal Commission that studied the Canadian economy, the so called "Gordon Report," which, according to Fayerweather (1974) ". . . was a turning point in Canadian thinking, marking the start of a progression toward ever greater nationalistic reaction to foreign investment which was still gaining momentum when the Mercantile affair took place."

It was not surprising then that, as Minister of Finance, he made clear his opposition to the purchase of the Mercantile by Citibank. In a speech in the House of Commons on June 14, 1965 Gordon reported on a meeting he had in July 1963 with representatives of Citibank:

> "I advised the representatives of the First National City Bank of New York not to proceed with their proposed action until after the Bank Act was revised. They were forewarned about the kind of legislation that might be expected."

The ownership restrictions that are currently in place started as the legislative response that Gordon warned of. Since the revision of the Bank Act was still being worked on the government took an intermediate step to make its intentions clear. In September 1964 the Insurance and Loan and Trust Companies Acts were amended to include a ban on a single significant (greater than 10%) share ownership and an additional restriction preventing aggregate share ownership by non-residents from exceeding 25%. At the time of the amendments, it was announced in the House of Commons that similar provisions would be included in the forthcoming Bank Act. In fact the restrictions were included in the 1967 revision of the Bank Act.

It seems that the ownership restrictions were initially put in place to prevent American ownership of Canadian banks and there is little indication that consideration of economic costs played a significant role in the decision. According to the Chairman of Citibank at the time, the following rationale was provided at a 1963 meeting with Gordon.

> "The argument was that Canada was a small developing country in which banking played a more important part than in mature countries. They now enjoy a very flexible working

---

[2] An excellent summary of the Mercantile Affair is found in Fayerweather (1974).

> arrangement between the Governor of the Central Bank and the chartered banks. They pretty much ignore the Mercantile Bank under Dutch control on the account of the scope of its activities. He [Gordon] expressed fears of an American manager and an American subsidiary being more responsive to our interests and those of the U.S. than those of Canada.[3]

The reference to the fears of American responsiveness to American interests may relate to an incident that apparently occurred in 1957. China sought a quantity of cars or trucks from Canada and it was proposed that Ford Canada would meet this demand. However, Ford's parent company vetoed the proposal since allowing the transaction would have involved a criminal offence under the U.S. Trading-with-the-Enemy Act.

Since that time the ownership restrictions have been modified somewhat. The free trade agreement, first with the US and then with Mexico resulted to a relaxation of the restrictions. It is now possible for aggregate foreign to exceed 25%. As a result, the 10% rule has become effectively the only remaining barrier to American ownership of Schedule I banks.

On May 21, 1997 the Minister of Finance announced that Bill C-82, An *Act to amend certain laws relating to financial institutions* will come into force during the next year. Included in the legislation are provisions for entry by Foreign Banks through branches rather than subsidiaries.

In summary, it seems that the primary objective of the ownership restrictions was to keep foreign banks from owning the large Canadian Banks. Foreign bank entry has since been introduced through Schedule II banks and is now being contemplated through branch banking into Canada. However, while foreign involvement in banking has been allowed, concentrated ownership of the large Schedule I banks are still off limits.

Australia

The Australian banking environment is remarkably similar to that in Canada. In addition to the similarities of geography and history, Australia has a population approximately 2/3 of Canada's and 4 major banks (Commonwealth Bank, ANZ, National Australia Bank, and Westpac) to Canada's 5. Similarly, ownership positions above 10% have been discouraged since the early 1970's. Until 1984, the situation was similar to Canada in that there was a simple prohibition on such large shareholdings. Also, there is an informal rule enforced by the Prudential Supervision branch that no single shareholder shall have more than two representatives on bank boards when the size of such boards exceeds seven. Since 1984, shareholdings between 10 and 15% have been allowed if the Federal Treasurer does not find this position to be counter to the national interest. Such permission was granted in at least two prominent instances, once in 1986-7 when Adelaide Steamship was allowed to purchase 15% of the National Australia Bank, and once in 1996 when the Australian Mutual Provident Society was allowed to purchase 15% of Westpac. We deal with the latter case in more detail below.

---

[3] Fayerweather, 1974.

Merger policy has if anything been more restrictive than in Canada. While the policy "big shall not buy big" has been informal in Canada, the big four Australian banks have been explicitly prohibited from either buying one another or being acquired by a foreign bank. We will return to these restrictions in the next subsection as they recently came under intensive scrutiny and major changes were both proposed and some adopted.

A major Commonwealth Government Inquiry was recently undertaken into the regulation of the Australian Banking system. While the official title of the inquiry and the associated report is *The Financial System: Towards 2010*, we will adopt the local nomenclature, the "Wallis Report" and "Wallis Commission", named for the chair of the Commission. The final report was tabled in April of 1997, and the Government is currently deciding which of its recommendations to adopt. The scope of the financial system inquiry was as broad as that of the current task force. They reported on consumer protection issues, prudential supervision and systemic risk, conduct and disclosure, and the structure of the regulatory bodies themselves. While no specific recommendations were made regarding the ownership limit, the report made detailed and dramatic recommendations regarding merger policy.

The major recommendations, numbered 79-85 in the final report, are easy to summarise. Recommendations 79-82 and 84 simply suggest that banks be subject to the same competition policies as other industries. Recommendation 83 is quite dramatic; it suggests that the "six pillars" policy which specifically forbade mergers among the four largest banks and the two largest insurance companies, be removed. Recommendation 85 also involves a major change by suggesting that the existing prohibition on foreign take-overs of the four major banks be removed, with bank acquisitions treated under the general provisions of foreign investment policy.

While recommendations 83 and 85 would represent a substantial break with past Australian practice, they are quite similar in content to those in the recent preliminary report issued by this task force in response to the government's request. In both cases, blanket restrictions were not supported. Rather, bank mergers are to be regulated in much the same way as any other mergers, with the primary concerns of lessened competition and foreign ownership addressed on a case-by-case basis. It is difficult to object to the competition aspects of the recommendation on economic grounds, and the implied liberalisation of foreign equity participation is certainly in line with the fundamental principles of freer trade.

Fortunately for our purposes, the Wallis commission's final recommendation was that the Australian government announce its decisions on merger policy and foreign ownership before considering the other suggested changes to the regulatory framework. We can therefore observe the associated public debate, business responses, and associated government decisions. The government decided to reject recommendation 83 and to adopt recommendation 85. Thus, the big four banks are still specifically prohibited from acquiring one another, while foreign acquisitions are possible, at least in principle. The decision to reject recommendation 83 was apparently in response to polls in which more than 2/3 of the respondents feared reduced competition, employment, and rural branches if the big banks were to merge (Gray, 1997). We examine the effects of these announcements on bank stock prices later in this report.

Elsewhere

Appendix 1 contains a table taken from a recent study from the Office of the Controller of the Currency by Barth, Nolle, and Rice (1997). It summarizes the ownership restrictions that apply to 19 countries and the European Union. If we add Australia to this list we find that, of the 20 countries considered, 12 have no restrictions on ownership of commercial bank shares by nonfinancial firms, one has some restrictions and seven, including Canada, have explicit restrictions on ownership.

One of the countries that does restrict ownership is the United States although their restrictions are less binding than Canadian rules. Non-bank companies must apply for appropriate regulatory permission if they acquire more than 10% of the voting stock of a bank and non bank companies are not allowed to hold more than 25% of a bank. On the other hand, a company that restricts its activities to bank related activities is permitted to hold more than 25% and is considered a bank holding company.

The UK on the other hand is essentially unrestricted in this regard. As part of its supervisory position, the Bank of England is required to assess the "fitness and respectability" of anyone holding more than 15% of a bank. The primary concern of the regulators is with the financial soundness of the shareholder.

A Conceptual Overview

An illustration of the concern about shareholder restrictions is found, in a document entitled "Should Our Big Banks Get Bigger?", by RBC Dominion Securities. The authors state:

> "Restrictions, such as the 10% rule, . . . depress market valuation and P/E multiples of bank stocks. Thus, the cost of capital for Canadian Banks is higher."

This quote is typical of what we have heard from analysts, bankers and policy makers and provides three central questions that our research must answer.

1. On what basis can we conclude that Canadian stock prices are indeed lower than those found elsewhere? In particular is the P/E multiple an appropriate measure and if so, is it in fact different in Canada than in the US.

2. Is there evidence that the cost of capital for Canadian banks is because of the ownership restriction?

3. In what other ways can the ownership restrictions directly reduce share value?

In the following section we set out a framework that allows us to examine these questions in a unified, consistent manner. Chapter 2 then provides the evidence that we have on these questions.

How Are Share Prices Determined?

Finance theory holds that the value of any financial security is the present value of all expected future cash flows that the security holder is entitled to, i.e.

$$\text{Price} = \sum_{t=0}^{t=\infty} \frac{\text{CashFlow}_t}{(1+k_t)^t}.$$

The numerator is determined primarily by decisions that the firm makes. This includes the investment opportunities that it exploits, the technology that it adopts, the productivity of its work force, etc.. In addition, however, the cash flows generated by a bank are determined by the regulatory environment. The ownership restrictions that we discussed are one example of a regulatory influence while the amount that is paid for deposit insurance is another.

The denominator, on the other hand, is determined primarily by the capital markets. The discount rate, *k*, is referred to as the cost of capital and represents the opportunity cost of the funds employed. As such it is the amount that investors could have earned on investments of comparable risk.

This simple framework applied to common equity is referred to as the Dividend Discount Model (DDM) and is the basis of much of the work of equity analysts.[4] As a general approach, however, this formulation is somewhat difficult to deal with as it requires that the analyst estimate individual cash flows and discount rates for each subsequent period of the firm's life. As a result, simplifications are used.

First, by assuming that cash flow is perpetual and that it and the cost of capital is constant each period, the pricing relationship can be simplified to

$$\text{Price} = \frac{\text{CashFlow}}{k}. \quad (1)$$

Alternatively, if it is assumed that cash flow grows constantly at a fixed growth rate g , then the pricing relationship becomes

$$\text{Price} = \frac{\text{CashFlow}}{k-g}. \quad (2)$$

In fact, (1) is a special case of (2) where (1) assumes that $g=0$. Under these assumptions it is possible to relate the cost of capital directly to observed stock prices as

$$k = \frac{\text{CashFlow}}{\text{Price}} + g. \quad (3)$$

---

[4] Most investment textbooks set out the various approaches that security analysts will take in estimating stock value. See for example Bodie, Kane, Marcus, Perrakis, and Ryan (1997), chapter 17 for example.

In practice, as indicated above, analysts focus on the price earnings multiple. In order to relate the price earnings multiple to the Dividend Discount Model, it is necessary to further assume that earnings are a reasonable proxy of the expected, constantly growing cash flow that the firm will generate over its life. That allows us to substitute earnings in for cash flow we can rearrange (2) to obtain

$$\frac{\text{Price}}{\text{Earnings}} = \frac{1}{k-g} \quad (4)$$

Under the assumptions we have made, the difference between the P/E multiples of various shares can be explained by differences in cost of capital and/or differences in growth opportunities. The attraction of this approach is that the earnings is a way of standardizing price so that comparisons and statements about relative value can be made.

Perhaps the most significant concern we have heard regarding the 10% rule is that it raises the cost of capital for Canadian banks, making it more difficult for the banks to compete internationally. Often it is claimed that evidence of their lack of competitiveness is the relative P/E ratios of Canadian banks. As equation (4) indicates, however, this conclusion can only be drawn under a number of restrictive assumptions that are not very realistic. To illustrate, suppose that Canadian and US banks face the same investment opportunities. Suppose that the P/E ratios of Canadian banks are lower than the P/E ratios of US banks. One explanation is indeed that the cost of capital for Canadian banks is higher. A second explanation, however, is that that earnings is a poor proxy for the market's expectations. A third is that earnings growth is more constrained in Canada than the US.

Are Earnings a Good Proxy for Expected Cash Flows?

We start our analysis of these issues in section 2.1 where we examine the P/E ratios of Canadian and US banks. Although the average P/E has been higher in the US than in Canada, we show that this difference is due largely to problems with earnings as a measure of cash flow. In fact, statistically, we cannot reject the hypothesis that the Canadian P/E ratios are no lower than US P/E ratios.

How Can Ownership Restrictions Raise the Cost of Capital?

The cost of capital is the opportunity cost of having funds tied up in the firm. Standard finance theory argues that the opportunity cost of capital is related to the riskiness of the investment. A commonly accepted measure of risk is the β of the stock, a measure of how sensitive an investment's return is to general movements in the market. This measure is based on the Capital Asset Pricing Model or CAPM, perhaps the most widely used model of risk and return. This model predicts the following relationship between risk and the cost of capital:

$$k_j = r_f + (r_m - r_f)\beta_j$$

where, in addition to the risk measure β,

k_i is the cost of capital,

r_f is the return available on risk free securities,

$r_m - r_f$ is the market price of a unit of risk.

Note that it is possible for a Canadian bank to have a higher cost of capital simply because it engages in investments that have a higher risk. This adds one more assumption needed to support any conclusion based on P/E ratios: The Canadian and US banks must be engaged in investments of equal risk. If, on average, Canadian banks made higher risk investments they would have a higher cost of capital without being at a competitive disadvantage or have shares that are undervalued.

It is possible, however, for the 10% rule to directly influence the cost of capital if its effect is to segment the Canadian equity market from world capital markets. It may be, for instance, that international investors are unwilling to hold Canadian bank stocks because of the ownership restrictions. We are not aware of any regulatory reasons why this would be the case, nor do we know of any theoretical arguments for why the market would be segmented along these lines. Nevertheless, we do examine this argument in more detail in section 2.2.

How Can Ownership Restrictions Affect Cash Flow Growth?

The other channel through which ownership restrictions can reduce P/E ratios in Canada is by taking away growth opportunities that would otherwise be enjoyed by the firm.

One important source of cash flow growth is corporate combinations through mergers and take-overs. It is widely believed that take-overs are driven by synergistic opportunities that require inputs from both parties. The ownership restrictions in Canada clearly prevent take-overs of banks by nonfinancial enterprises.[5] While it is difficult to assess the exact cost of these lost synergies for Canadian banks, in Section 2.3 we examine evidence on mergers and take-overs, regulation relating to take-overs, and the value of a vote. This evidence combines to suggest that eliminating take-over possibilities is in general costly for firms that are likely to be take-over targets. The evidence on take-over bidders is less clear.

A second channel through which cash flow growth is influenced is through shareholder monitoring of management. An argument can be made to suggest that shareholders require a certain minimum stake in the firm in order to find costly monitoring of management to be worth while. Ownership restrictions that prevent sufficient accumulations will, therefore, be costly to shareholders. In Section 2.4 we review the evidence on shareholder monitoring and relate it to Canadian banks.

---

[5] That is, acquiring a majority of the voting shares is impossible. It is not clear, however, that it is impossible to acquire some sort of "control" even with a 10% ownership restriction. In Section 2.3 we discuss the case of Kerry Packer in Australia who does gain considerable influence though not outright control despite similar ownership restrictions.

2. Impact of Ownership Restrictions

In this chapter we examine the issues raised in the previous chapter in more detail. We begin with the question of whether or not Canadian Bank Stocks are in fact lower than US Bank Stocks. In section 2.2 we consider the possibility that ownership restrictions raise the cost of capital. In section 2.3 we then consider the possibility that ownership restrictions reduce growth by impeding takeovers. In section 2.4 we consider the possibility that growth is reduced by impeding monitoring of management.

Price-Earnings Multiples

Many equity analysts that we interviewed believe that Canadian banks have traditionally been undervalued relative to their US counterparts, although few agreed that the 10% vote restriction was the primary cause. Such statements are generally couched in terms of price-earnings or P/E ratios, with Canadian Banks suffering from depressed P/E ratios relative to their American counterparts.

Price-earnings ratios are widely used and have substantial intuitive appeal. All else equal, a company with higher earnings should enjoy a higher price, and companies whose prices are high relative to earnings can be said to enjoy a favourable market for their shares. The problems with this measure have been detailed earlier. In essence, they reflect the fact that in an efficient market, the price should equal the discounted sum of all expected future cash-flows. The first problem is that the price-earnings ratio is a single number which reflects two fundamentally unknown factors; expected future cash-flows, and the discount rate that the market applies to the firm. The second problem, which will turn out to be particularly important in some of the comparisons which follow, is that reported earnings need not capture true expected cash-flows in any given period nor do they necessarily correspond to the market's assessment of what future cash flows will be. This is particularly true of the common practice of using the last reported, or "trailing" earnings which may be a poor indication of things to come in a changing environment. While we look primarily at trailing P/E multiples we also give some results with an earnings forecast which equals realised earnings 12 months later, called "forward" earnings.

In this subsection we assess the P/E ratios of Canadian Banks in two ways. First, we compare them to a subset of their US counterparts. Second, we compare the prices of the Canadian Banks to those arrived at by a direct, but highly imperfect, attempt to estimate their discount rates and expected future cash-flows.

Preliminary Issues

In order to say that Canadian P/E ratios are "too low", one must have a reference point. A common practice is to compare them to U.S. Banks. Even if this comparison is adopted, two difficult issues must be immediately resolved; which US banks, and over what time period? The US has a vast number of small regional banks, which are clearly not comparable with the Canadian banks with their national and world-wide scope. To maximise comparability, we use

the six largest US "money centres", namely Citibank, Bank of America, Chase Manhattan, JP Morgan, Bankers' Trust, and Bank of New York.

The choice of time-period is also critical for comparing P/E ratios since bank prices and earnings are both cyclical and noisy. Moreover; business cycles in Canada and the US are not perfectly synchronised. These considerations argue for a long time-period to smooth out short-term movements. Unfortunately, the banks themselves have not been static; one of the motivating forces behind the current inquiry is precisely that Canadian banks have undergone substantial changes in their activities and revenue sources over the past 20 years. To reduce the chance of using outdated numbers, we begin our comparison in 1988, at which point both US and Canadian Banks were already well in the process of expanding beyond traditional banking. It also avoids potential measurement problems from the prices associated with the market decline of October 1987. Finally, we take quarterly observations for both US and Canadian banks. While more frequent observations would increase our statistical power, earnings are not reported over any shorter time-intervals.

Before engaging in the comparison of P/E multiples, we should set the US numbers in some international context. On August 28 of 1997, for example, the average price-earnings ratio of our six US banks was just under 16. The average for the six largest UK banks was somewhat higher at 17.4, while the average P/E ratio for the four major Australian Banks, which may be most comparable to the Canadian Banks in terms of host country, size, and business mix, was only 12.5. Consistent with the common perception that Canadian banks are discounted relative to US Banks, the average P/E multiple of the five major banks was just under 13. This comparison is presented to illustrate how the common perception that Canadian Banks "sell at a discount" can be supported. As we show next, however, this conclusion does not hold up under closer scrutiny.

A Historical Comparison of P/E Ratios

Even a cursory inspection of the historical record indicates that Canadian Banks have not always had lower P/E ratios than those of their U.S counterparts. In the four quarters of 1990, for example, the average P/E ratio of the five major Canadian Banks was 11.4, which substantially exceeded the average of the six US money centres at 7.1. This situation reversed itself in the next year, with Canadian Banks P/E dropping to 9.1 and the US rising to 10.7. The years 1994-1995 tell a similar tale. Canadian Banks' average P/E ratio was 12.6 over 1994 while that of the US money centres was only 7.9. The two reversed ranking once again in 1995, with Canadian Banks' P/E ratio dropping to 9.7 and those of the US rising to 11.5. The US banks continue to trade at a P/E premium at the moment.

The above paragraph provides a condensed but essentially accurate picture of the relative P/E ratios of the two sets of banks. Both sets of bank P/E ratios exhibit considerable variability over time, and the movements are not synchronised to any great degree. Before we compare the overall averages of the US and Canadian Banks, we should highlight the fact that average P/E ratios obscure an extremely important fact that, to us, seriously compromises their value as a tool for gauging the effects of ownership or merger restrictions. The quarterly P/E ratios are not, as some observers might believe, primarily driven by movements in stock market valuations. Rather, they are driven by changes in reported earnings. A simple way to gauge the relative

importance is to note that knowledge of changes in earnings alone can explain over 60% of the movements in either the US or Canadian Banks' P/E ratios over our sample period, while knowing only price changes would explain less than 10% of the movements.[6] In this sense, earnings movements are "responsible" for a great deal of the volatility in P/E ratios, and in any short-term differences we might see between US and Canadian ratios.

The above observation is disturbing for two closely related reasons. First, it suggests that accrual and realisation policies or short-term profit fluctuations, rather than fundamental issues such as ownership restrictions, are largely responsible for P/E movements. Second, P/E ratios are extremely sensitive to earnings when earnings are low or negative. A firm will have an extremely high, "favourable" price-earnings ratio if it reports small positive earnings, and a high negative ratio if it reports small negative earnings. Table 1 summarises the P/E ratios of our 11 banks along with country-wide averages from June 1988 to December 1996. To highlight the importance of low earnings, we report not only the average P/E ratios, but also the standard deviation which measures the variability of the prices, the median which indicates the value at which P/E ratios are equally likely to fall above or below that value, as well as the highest and lowest P/E ratios over the period.

Table 1: Price-Earnings Ratios of Canadian and US Banks, 1988-96

Bank	Mean Trailing P/E ratio	Standard Deviation	Median	Minimum	Maximum
Canadian 5	7.36	55.7	9.4	-265	136
US 6	13.86	12.2	10.5	-3.9	67
Citibank	13.43	35.2	8.6	-47.5	174
Bank of Am.	8.14	2.2	8.5	4.2	12
Chase	20.28	40.5	7.8	-8.0	163
JP Morgan	7.72	5.6	8.6	-6.9	14
Bankers Trust	8.25	9.2	6.1	-4.9	38
Bank of NY	25.33	72.9	10.6	-78	406
BMO	38.07	110.8	9.7	5.7	634
BNS	9.68	4.1	8.7	4.9	23
CIBC	12.86	17.4	9.3	-34	72
Royal	-35.68	249.3	9.2	-1382	89
TDB	11.88	4.7	10.6	5.1	29

A simple comparison of the overall mean P/E ratios of the Canadian and US banks suggests that the Canadian Banks do suffer from substantial undervaluation. The remaining numbers, however, seriously undermine any statement about the comparative P/E ratios. First, the standard errors on the two averages are so large that the difference could easily be due to chance; that is, the difference between the US and Canadian P/E ratios are not statistically significant. Second, the medians, which often present a fairer picture of the average than the means, are nearly equal.

The barriers to making inferences about the P/E ratios, however, stands out most clearly in the extreme values. Earnings can be negative, and many of the banks therefore show negative P/E

[6] These percentages are the adjusted R^2 statistics from ordinary least squares regressions of P/E ratios on contemporaneous earnings and prices, respectively.

ratios at some points in time, and the average P/E ratio for the Royal Bank is negative over the entire period. From the overview presented in section 1.2 we know that negative earnings are not likely to represent a reasonable proxy for expected future cash flows: If the market felt that long run earnings would, on average, be negative, the stock price would be extremely low.[7] If we discard all negative earnings observations, the Canadian and US banks exhibit nearly equal P/E ratios. This procedure, while defensible given the absurdity of negative P/E ratios, does not restore the viability of the comparison. The reason is clear from inspection of the highest P/E ratios, which often exceed 100. Like the negative P/E ratios, these extreme and implausible values reflect times when banks report extremely low earnings. By construction, a price-earnings ratio is extremely sensitive to earnings when earnings are low. The Bank of Montreal in 1990 provides a useful illustration. In January it reported earnings per share of $5.16, which dropped to 4 cents in April. The stock price also fell, from approximately $29 to $25 per share, but the P/E ratio increased from 5.6 to over 630.

Clearly, low earnings can result in both very large and very small P/E ratios. There is no single correct way to compensate for this fact. A common practice is to identify the large and small "outliers" and either remove them from the sample or set their values equal to those of their nearest neighbors. To give a sense of the potential effect of outliers, Figure 1 plots the US and Canadian banks P/E ratios as a function of time. The outliers for the Canadian bank average are so wide that they distort even the scale of the plot. However, there are only three such outliers. To account for this effect in a systematic and balanced fashion, we remove the two largest and the two smallest outliers for both country averages. The data from this restricted sample are presented in Figure 2. The two countries' ratios now appear on the same scale, and indeed it is difficult to perceive any systematic difference between the two. The following statistics indicate that this is indeed an accurate observation.

Table 2: Price-Earnings Ratios of Canadian and US Banks, Outliers Removed

Bank	Mean Trailing P/E ratio	Standard Deviation	Median	Minimum	Maximum
Canadian 5	10.2	2.02	9.74	7.20	15.8
US 6	9.59	2.82	9.65	5.28	15.6

Removing the four most dramatic outliers directly reduces the variability of the P/E ratios, measured either by standard deviation or by the difference between minimum and maximum values. Rather than revealing a fundamental and persistent relative shortfall in the Canadian P/E ratios, however, removing the outliers does away with any apparent advantage for the US banks. Since the US and Canadian P/E series are both less variable, it is less likely that any difference between the two that we might detect could be due to chance. However, the average difference is now negligible and if anything tends to favour the Canadian banks.

[7] The stock price would not be negative because the option value associated with common equity. As long as there is some chance that earnings will be positive (even with negative expected earnings), the stock price will be positive until the equity is extinguished through bankruptcy or windup.

Before concluding that there are no systematic differences between the P/E ratios, we considered a set of alternative measures which account in different ways for the problems with trailing P/E ratios. These methods buttress the conclusion that there is little if any systematic difference between the P/E ratios of the US and Canadian banks.

The first refinement attempts to account for both wide fluctuations in reported earnings and the fact that prices should be determined by prospective rather than past earnings. We switch from "trailing" 12-month "forward" earnings, that is, we use average earnings over the four quarters after a price is observed as the denominator in a P/E ratio. This procedure produces exactly the same conclusion, however. If we use the whole series of P/E ratios, the US banks appear to have higher P/E ratios but the series is so variable that no firm conclusion can be drawn. If we drop outliers, the Canadian banks' P/E ratios exceed those of the US banks but by a trivial amount. We arrive again at the conclusion that Canadian P/E ratios are not systematically lower than those of the US over the sample period.

An alternative approach to dropping P/E outliers is to average the earnings over windows that are sufficiently long to reduce the effects of the small and negative observations. In so doing, of course, we reduce our sample size unless we use earnings data more than one year *prior* to the prices used in computing the P/E ratios. Since prices reflect prospective rather than past earnings, such a procedure is unattractive. Instead, we experimented with two-year, three-year, and five-year averages of earnings with the same basic result as that obtained by dropping outlier P/E ratios. The volatility of the P/E ratios is greatly reduced as we extend the period over which we average earnings, but so is any difference between the US and Canadian averages.

As a final check, we address a common explanation for the perceived difference in P/E ratios between US and Canadian banks, namely that Canadian stock prices in general are depressed relative to those of the US. The obvious way to account for such differences is to deflate US P/E ratios by the S&P 500 average and the Canadian P/E ratios by the TSE 100 average. Clearly, this is a problematic exercise given the differences in the composition of the two indices. The results, however, are similar to those obtained by the straight P/E comparisons; the Canadian Banks appear at some times to be relatively highly priced and at other times to be relatively low-priced, with no overall systematic differences and the results extremely sensitive to low earnings.

Conclusions

In earlier chapters, we summarised some potentially serious conceptual flaws with P/E ratios as a way to either value banks or to assess their cost of capital. Such ratios do not distinguish between expected growth rates and true discount rate or cost of capital issues. Examination of actual bank P/E ratios reveals an additional practical shortcoming. The ratios are unduly sensitive to low and negative reported earnings which themselves are made more volatile by the discretion given to banks in setting accounting policies. For instance, allowances for loan losses can be influenced by management's judgement. If we ignore these problems, it appears at first blush that US P/E ratios are systematically higher. The difference is not however statistically significant, because the earnings fluctuations make the P/E series extremely volatile. When we remove the influence of outlier observations or otherwise smooth the data to reduce this volatility, however, the difference between US and Canadian bank values disappears. We are

quite confident in concluding that there is little systematic, long-run difference between the P/E ratios of US and Canadian Banks. Having explored the actual numbers, we are equally confident that such ratios are of little value in assessing the valuation consequences of stable, well-known policies such as the 10% ownership restriction.

Cost of Capital

In examining the cost of capital, we take the expected cash flow of the firm as fixed and ask how the ownership restriction can affect the price at which the claims to this fixed cash flow are set in the market. To illustrate, suppose a Canadian bank is considering expanding its operations in Mexico. Suppose further that the expected cash flows and risks of the cash flows are unaffected by an ownership restriction[8]. The question we ask is, with the distribution of cash flows fixed, is there some reason why shares of this expansion would be less valuable if the bank were subject to an ownership restriction.

The theory on which our analysis of the cost of capital is based is focused on the problem faced by a typical investor. Bank shares are available to the investor at some price p and the investor must decide whether or not the stock is, at this price, more or less attractive than other investment vehicles. The benchmark on which this decision is based is a risk adjusted, per period expected rate of return available on other investments. If the expected return at price p is higher than comparable stocks, investors will sell other securities to buy bank stocks pushing prices up and expected returns down. The equilibrium price is the price at which the risk adjusted expected return is exactly equal to the expected return on other investments of equal risk.

The hypothesis that we consider is that the ownership restriction reduces the value of investments made by banks because they impose a constraint on the ability of the investor to hold a fully diversified portfolio. The impact of this hypothesis is best illustrated in context of the Capital Asset Pricing Model (CAPM). The implication of this model is that the return on each asset is increased by an amount that compensates the investor for the additional risk that the security adds to a well diversified portfolio. Hence, it is not the total risk of a security that is important for asset pricing but the component of risk that is added to the portfolio because it is not eliminated through diversification. Importantly, the return required for each asset depends on the portfolio to which the asset is being added. The more broadly based the portfolio, the more likely it is that the total risk being added by an investment will be diversified and the lower will be the required return on the added asset.

In this context, ownership restrictions can affect the cost of capital in two ways. First, if we assume that the supply of shares is fixed, the ownership restriction may prevent some shareholders from holding as much of the shares as they would like, thereby reducing their ability to diversify. As a result, the demand of some shareholders is lower than it otherwise would be and this keeps the price of the shares lower (and the cost of capital higher) than they otherwise would be. As banks grow, however, the 10% restriction becomes less of a constraint on

---

[8] In the following two sections we reverse the assumptions: the cost of capital is taken as given and the expected cash flows are allowed to be influenced by ownership restrictions.

individual investors and, if banks are large enough, may ultimately not be a factor in pricing of the securities. In fact, Canadian banks seem to be relatively large as there is little evidence that the 10% restriction is a binding constraint on individual shareholders.

The second way in which the ownership restriction might affect the cost of capital is if it results in a segmented market wherein bank shares are held by investors who do not have access to world capital markets. If capital markets are segmented in this way, it can result in a higher cost of capital. Investors will have to be compensated for the fact that they are unable to diversify as fully as otherwise would be the case. This implies that investors will demand compensation for risks that could be diversified away in a global market. It is somewhat difficult to construct a plausible scenario to support the segmented markets view. One possibility, however, is that the ownership restriction makes investment in Canadian banks unattractive to large international institutional investors[9]. If these institutions are also best able to diversify internationally then bank stocks may be priced as if they were held in a restricted portfolio with relatively limited diversification value[10].

It is difficult to directly test this hypothesis since it is a joint hypothesis that bank shares are priced in a segmented market and the segmentation is due to the ownership restriction. This is especially difficult to assess in light of two earlier studies (by Stiehl (1977) and Jorion and Schwartz (1986)) that provide support for the hypothesis that Canadian equity markets in general are segmented. This means that we must show not only that bank shares are held in a segmented market but that the degree of segmentation is greater for banks than for other Canadian companies. Even if this is shown to be the case, we can only say that the ownership restriction *may* explain the greater degree of segmentation since there may be other reasons for bank stocks being segmented.

The test that we propose follows on the earlier work of Stiehl (1977) and Jorion and Schwartz (1986) who test the hypothesis that capital markets are integrated internationally. Both studies are based on the Capital Asset Pricing Model. According to this model, if markets are integrated investors will employ a global capital market to diversify risk so that the expected return on any asset will be given by

$$k_j - r_f = \gamma_0 + \gamma_1(r^g - r_f)\beta_j^g$$

---

[9] For instance, institutional shareholders may be discouraged from holding shares with restricted ownership due to the so called free rider problem. The free rider problem refers to a situation where the costs of monitoring are absorbed by the monitor while the benefits are shared in proportion to shareholdings. In such a situation, large shareholders will only invest in a company if they are able to acquire a large enough share so that their share of the gain will cover their costs. Ownership restrictions will, therefore, make it less likely that large shareholders will invest in the firm.

[10] Even this statement must be qualified in that their may be an offsetting effect. If Canadian investors were completely segmented and if there is a relatively scarce supply of risky investments in Canada, then the cost of capital may be lower as investors compete for the limited securities.

where all variables are as defined in section 1.2 but the return on the market r^g is the return on an unconstrained (global) market and the risk measure β_j^g is computed relative to a global portfolio.[11] Since the global market is unconstrained, if capital markets are fully integrated, the returns on a more restricted market, one in which the bank stocks trade, would not be able to add to the explanatory power of the model. To test the hypothesis that ownership restrictions segment the market requires specification of the constitution of the restricted portfolio. We assume that the restricted portfolio is the domestic Canadian equity market. Thus, the specific hypothesis is that investors who hold the shares of Canadian banks are unable to benefit from the diversification benefit of holding an internationally diversified portfolio and instead price these stocks relative to the Canadian equity market only.

Unfortunately, we cannot test this model by simply including the Canadian market as an explanatory variable since it is highly correlated with the global market. Instead, we construct an instrument for domestic returns, V_{cg}, from the following regression.

$$r^c = c_0 + c_1(r^g - r_f) + V_{cg}$$

In this equation, returns on Canadian equities minus the risk free rate, denoted by r^c, are projected on the excess returns to the global market. The residuals from this projection, V_{cg} are, by construction, uncorrelated with that part of the returns on the Canadian market that are explained by the global market. We will refer to V_{cg} as the Canadian factor. Following Jorion and Schwartz, a test of integration can be formulated as a test of whether or not γ_2 in the following regression is in fact zero.

$$k_j - r_f = \gamma_0 + \gamma_1\beta_j^g + \gamma_2\beta_j^{cg}$$

In this equation, β_j^g is the sensitivity of the bank's returns to global returns and β_j^{cg} represents its sensitivity to the Canadian factor. If markets are fully integrated, investors would price securities in terms of the global factor only so that returns would not be explained by the Canadian factor at all.

It is common to follow Fama and MacBeth (1973) in estimating the model. This procedure requires that the risk factors be estimated from time series data on each asset. The risk factors are then used in a cross sectional regression to estimate the importance of these factors in explaining the data. For statistical reasons, the test is run on portfolios of assets rather than individual stocks. This creates difficulty for our test since we are dealing with only six major banks in

[11] As a simple proxy for a global index we simply form a value weighted portfolio of the Toronto Stock Exchange and the New York Stock Exchange.

Canada and forming more than one portfolio from this set is inappropriate. We consider an alternative test[12] that requires that we estimate the following system of equations.

$$k_j - r_f = \gamma_{01} + \beta_{j1}^{g}(r^g - r)_f + \varepsilon_1$$

$$k_j - r_f = \gamma_{02} + \beta_{j2}^{g}(r^g - r_f) + \beta_j^{cg} V_{cg} + \varepsilon_2$$

If markets are integrated, the addition of the Canadian factor will not affect pricing so that there will be no change in the intercept of the equation. Hence, the test of integration can be formulated as a test of whether or not $\gamma_{01}=\gamma_{02}$.

In addition, we wish to evaluate whether or not the Canadian factor is widespread or concentrated on the banking sector. Consequently we estimated our two equation model separately for the financial services subindex[13] of the TSE composite as well as for oil and gas, metals and minerals, utilities, golds, merchandising, and papers and forest products. In no case were the intercepts significantly affected by the addition of the Canadian factors. This result contrasts with earlier studies and supports the hypothesis of integration. Since our data is from a more recent period, our results suggest that Canadian and US markets in general may be becoming more integrated. Moreover, we were unable to reject the hypothesis that the slope coefficient for the second equation (that includes the Canadian factor) is equal across firms, suggesting that the banking sector is not different from that of other sectors.

It is important to add a caveat to our conclusions. We have followed the literature in basing our analysis on the Capital Asset Pricing model. Recent work by Fama and French (1992), (1997) brings into question the value of using the CAPM as a basis for a test of this sort. Thus, our results should be viewed as tentative and should be the subject of further research.

Take-overs and Mergers

The 10% ownership rule clearly affects bank shareholders' ability to participate in the gains paid to target shareholders in a takeover. In fact, this was the primary intent of the introduction of these restrictions. Would-be bidders are directly prohibited from purchasing a controlling block of shares either on the open market or through a tender offer. Mergers can happen in principle if the successor bank qualifies as a Schedule I bank, but still must pass competitive regulations.

While there is little doubt that the 10% ownership rule impedes many possible business combinations, there remains the question of whether such combinations would be beneficial for bank shareholders and for society as a whole. We focus here on the gains to bank shareholders, while recognising that mergers could benefit shareholders at the expense of consumers or employees.

---

[12] We thank Burton Hollifield for suggesting this alternative.
[13] The five largest Canadian banks account for about 95% of this subindex.

Is is often argued that mergers between the Canadian major banks, or between a Canadian bank and a large foreign bank, would be an unmixed blessing to the shareholders of the banks, if not to all the employees. Terms such as "consolidation" and "rationalisation" suggest that the current structure is artificially fragmented and that banks must increase their size to become "internationally competitive" (eg., Cleghorn, 1998; Crane, 1998). The Task Force's preliminary statement on merger policy released July 11, 1997 is agnostic about the importance of size and mergers as a prerequisite to efficiency and international competitiveness (page 7). As this section argues, such caution is entirely appropriate. Very little is known about the costs and benefits of raw size for firms in general, not to mention financial institutions. Mergers that promised to reap "scale economies" or "synergy" have in many cases provided sub-par returns for the acquiring firm's stockholders and reduced profitability (e.g., Morck, Shleifer and Vishny, 1990; Berger and Ofek, 1996).

While some mergers have undoubtedly been ill-advised, on average they do seem to increase the combined value of the bidder and target at the time the merger is announced. However, the *distribution* of these gains is not symmetric. Targets, on average, receive a far greater percentage of the value of mergers than do bidders. While bidders in Canada have, in the past, tended to capture a larger share of the gains from mergers than those in the US, target shareholders still fare better than do those of the bidding firm. This suggests an important caveat to any conclusion that lifting the 10% rule and facilitating mergers would increase bank values; it will do so in greater degree for banks that are likely to be taken over, rather than those that are likely to be the buyers.

This section is organised as follows. We first summarise evidence from the US and Canada on the returns enjoyed by bidders and targets for non-financial firms, and then turn to US studies of the banking industry. While this evidence is suggestive, it is indirect. By restricting attention to those firms that actually participate in a combination, we are unable to isolate the effects of regulation. Moreover, it is unlikely that all Canadian banks would be involved in mergers if regulations were relaxed.

To gain more insight, we present two novel pieces of evidence. To isolate the effects of regulation, we exploit that fact that Australia recently completed a major review of its banking regulations with far-reaching recommendations on merger policy. We study the effects of such regulations on the prices of the major Australian banks. To better identify the effect of merger restriction on Canadian bank values, we exploit the fact that many TSE firms are financed with both superior and inferior voting stock. The premium on the voting stock can be attributed to the potential gains its holders would receive if the firm were acquired. Recent studies of this premium allow us some ability to gauge the additional value that bank stockholders would reap if the 10% ownership rule were relaxed.

Gains to Bidders and Targets

Evidence Outside the Banking Field

A comprehensive summary of both merger activity and the gains to bidders and targets in the US can be found in Comment and Schwert (1995). The gains to the participating stockholders show a clear pattern over time, with rising premiums paid to targets due both to regulations and take-over defences which placed ever-greater burdens on bidders. Such burdens, however, seem to have had little effect on overall merger activity. Bidders appeared no less eager to participate in mergers in the 1980's and 1990's when average premiums paid to targets often exceeded 40% as they were in the 1960's when average premiums were less than 20%. However, such eagerness often came at the expense of bidding firm shareholders. Average abnormal returns to acquirers were 4% for acquisitions between 1963-1968, 1% for acquisitions between 1968-1980, and -3% for acquisitions between 1981-1991.

While bidder gains appear to have fallen over time, it is important to note that such estimates are far noisier than those for targets. Bidders in the US are, on average, far larger than targets. This confounds any attempt to isolate the effects of an acquisition on the bidder, both because their stock prices are more subject to influences other than the acquisition, and because they are often more closely followed by analysts so that stock prices may already impound much of the value effects of future acquisitions.

The situation for Canadian bidders appears somewhat more favourable. Eckbo (1986) estimates the average gains to bidders and targets for 1930 mergers between 1964 and 1983 at 3% and 9%, respectively. It is unclear, of course, whether the superior gains to bidders are a Canadian phenomenon, or whether they reflect the relatively early time-period of Eckbo's study. Doukas and Travlos (1988) report evidence which suggests that the low returns earned by US bidders can be attributed to the difficulties of taking over a US target. Specifically, they find that returns to US bidders are significantly higher when they purchase foreign targets.

While it is difficult to come to a firm conclusion regarding the gains to bidding firms, there is no doubt that target firms receive large gains. The only issue is whether these gains are "only" on the order of 10% or whether they are as large as 50% or more. Moreover, the source of these gains is not well known and it may be that the gain to society is smaller. For instance, to the extent that the gains come from market power, losses to consumer may offset shareholder gains. We now turn to studies of bank mergers to narrow our estimates.

Evidence from Banking in the US

US banking regulations have traditionally discouraged mergers and acquisitions between banks in different states. However, since 1982 a substantial number of interstate bank mergers have taken place following the Douglas amendment to the original Bank Holding Company Act. Cornett and De (1991) study 196 such mergers and find significant positive gains for the bidders as well as the targets. This finding may suggest that Canadian banks would similarly gain if they were to purchase regional or even large interstate US banks. The prospect of regional

diversification may be similar, especially in US states whose industrial mix is less natural-resource intensive than that of Canada.

The evidence for international acquisitions, however, presents a less favourable picture. In contrast to the evidence for non-banks, when US banks acquire foreign banks the reaction is not significantly different from zero (Hudgins and Seifert, 1996; Waheed and Mathur, 1995). While the foreign targets enjoy significant positive abnormal returns (Hudgins and Seifert, 1996), Waheed and Mathur find that acquirer returns are negative when banks expand into developed countries and positive when they expand into developing countries. Again, this pattern may be attributable to regional diversification or lack thereof. An interstate US bank may already have a loan portfolio with much the same risk characteristics as those of many developed countries outside the US, while developing countries may provide a different and complementary risk profile.

The evidence on bank mergers suggests that there may well be gains to Canadian banks in making foreign acquisitions, but, as always, the gains to their shareholders are likely to be greatest if they are acquired. The major caveat we would add to the above evidence is that the banks studied may have been dependent on traditional sources of business than they are currently. Whether these changes have fundamentally altered the underlying economics of bank mergers is an open question. However, we are still confident of the conclusion that targets should reap larger gains than bidders, since this qualitative conclusion seems to hold regardless of time-period or industry under study.

There is an additional, indirect avenue through which the 10% ownership limit may affect the gains to Canadian bank mergers. Some researchers have attributed the negative returns earned by some bidding firms as evidence that managers are seeking size and expansion even at the expense of shareholder wealth. Clearly, such explanations are viable to the extent that managers are free to pursue their own ends when they conflict with those of shareholders. To the extent that the 10% limit restricts shareholders' control over managers, we may see a worse choice of acquisition targets. Allen and Cebenoyan (1991) study the returns to bidders in all banking mergers between 1979 and 1986. They find that firms in which the five top outside shareholders held more than 12% appeared more selective in their merger decisions than were firms that were more diffusely held. Specifically, firms with more concentrated outsider shareholdings were less likely to undertake a merger, but enjoyed larger abnormal returns when they did choose to merge. We take up this topic of large shareholder monitoring in more detail in the next section.

Bank Stocks and Merger Regulations: The Case of Australia

The regulation of Australian Banks was summarised earlier in this report. Here we focus on the effects of the government's decisions on the market value of the four major banks.

In apparent contrast to the stance of the major Canadian Banks, three of the four major Australian Banks (Australia New Zealand (ANZ), Commonwealth Bank (CBA), and Westpac) expressed little support for recommendation 83 in their submissions or in subsequent media commentary. The National Australia Bank (NAB), however, objected strongly to both decisions. Gray (1997) describes Don Argus, CEO of the NAB, as going "public with his assault on the Government,

describing its decision to block mergers between the four big banks, while in principle allowing foreign companies to acquire one of them, as 'farcical' and 'left-handed logic'". The NAB's public stance has also differed sharply from that of the other three major banks on the Wallis report's recommendations to open access to the payments system to non-banks, with NAB in support and the other three strongly opposed. There is a fairly straightforward explanation for why the NAB's stance is so different. They are widely known to have sought to buy one of the other three major banks, who in their turn have expressed no interest in participating in any such mergers as acquirer or as target. Also consistent with this view, the two most vocal critics of Argus' stand was the CEO of the Commonwealth Bank which along with ANZ was viewed as the most likely target for the NAB's acquisition ambitions. In particular, David Murray, the CEO of Commonwealth Bank is reported as " 'sure' that NAB's merger aspirations were behind its aggressive push for more competition" (Gray, 1997).

The recommendations and government decisions surrounding the Wallis report allow us an opportunity to gauge the importance of mergers, and particularly merger regulations, on the stock price of bidding and target firms. We view the NAB as the potential bidders and the other banks, particularly the Commonwealth Bank, as potential targets. If merger restrictions harm potential bidding or target firms, then events which increased (decreased) the probability that such restrictions would be relaxed would increase (decrease) the value of such firms. There are two potential days on which such events might have occurred. First, the Wallis report with its recommendation to relax merger restrictions was made public on April 19, 1997. Unfortunately, there was a great deal of publicity and many press releases before the official release of the report, so that much of the information may have already been impounded into prices on that date. The government's response to the recommendations was, fortunately, more sudden. Gray (1997) reports that on May 19 a member of the Australian senate publicly expressed doubts about the Wallis report's merger proposals, and on May 23 the government explicitly rejected recommendation 83.

To gauge the effects of these announcements on bank stock prices, we compute the daily abnormal return for each of the banks as:

$$AR_{jt} = r_{jt} - [r_{ft} + \beta_j[r_{mt} - r_{ft}]],$$

where j refers to the bank and t refers to the date. The variable r_{jt} is the actual daily return on the stock of bank j, r_{ft} is the prevailing one-year inter-bank loans rate in Australia and captures the risk-free rate of return. The variable β_j is the beta coefficient for bank j computed using the "All Ordinaries" index of Australian stock returns, and r_{mt} is the return on the all ordinaries index.

Chart 1 shows the abnormal returns for the four major Australian Banks during the release and early debate over the Wallis recommendations. Series 1 refers to the ANZ bank, series 2 is the Commonwealth Bank, series 3 is the National Australia Bank, and series 4 is Westpac. Consistent with the view that information about the Wallis report *recommendations* leaked out slowly over time, none of the banks show any significant abnormal returns near the release of the report. Only three of the abnormal returns in Chart 1 are large enough to be statistically

significant at the 5% confidence level[14]; the negative returns for ANZ and Commonwealth Banks on May 16 and 19, respectively, and the positive return for ANZ on May 21. While it may appear that the ANZ's loss on May 16 was subsequently made up, cumulative abnormal returns for the ANZ over the period May 15-30 equal -4.7% and those for the Commonwealth bank equal -7.1%.

These results are broadly consistent with the view that target shareholders gain more than do bidding shareholders, and are thus harmed more by merger restrictions. While NAB management may have been pleased at the Wallis report merger recommendation and aggrieved when the recommendation was not adopted, neither move seems to have had any significant impact on NAB shareholders. The shareholders of the two most likely targets, however, seemed to suffer significant losses when the prospect of a merger was reduced.

The strengths of the above exercise is that we are able to link changes in the value of banks to changes in regulations which are similar to those that currently affect the major Canadian banks. The weakness are the small sample, the potential inapplicability of the Australian data to the Canadian case, and the difficulties of isolating the key dates at which information became known to the market. We now present data with complementary strengths and weaknesses.

The Value of Control

In this section, we attempt to directly address the question of whether ownership restrictions reduce the value of Canadian banks. Since some mergers often involve premia of over 50% to target shareholders it is possible that the restriction has a massive effect. However, such a premium is not a sensible estimate for the effect of take-overs on an average firm. First, the bidder receives a very small boost to its stock price. Thus, the control premium which Canadian banks would enjoy is larger if they are more likely to be targets than bidders. More important for present purposes, take-over premia are observed for firms which have received an actual rather than a prospective bid. The schedule I banks would not all immediately receive such a premium if the 10% ownership restriction were lifted. Rather, the effect on their prices would be reduced by the fact that a takeover bid is not certain, and for the expected time until any bid might materialise.

Fortunately, there is a avenue to gauge the prospective take-over premium for firms which are not the subject of an imminent bid. Bank shares are not the only Canadian equities which are "deprived" of the take-over premium. Almost 14% of TSE firms have differential voting right stock (e.g., Maynes, 1996). The holders of the inferior voting stock are in a similar position to Canadian bank shareholders in terms of their ability to reap a take-over premium. The following experiment provides a useful perspective on the possible magnitude of the take-over premium. Suppose that Canadian bank shareholders are currently akin to holders of limited voting stock because they cannot enjoy a control premium. If the 10% rule were lifted, they would become like non-block holders of superior voting stock. This is a sensible comparison since everyday

---

[14] Standard errors for the abnormal returns of each bank were computed using daily data from January 1991 to August 1997.

trading prices for both types of securities (actual superior voting stock and bank stock in the event the 10% limit were lifted) are set by non-controlling shareholders, that is, those who trade their shares. Fortunately, there are studies which estimate the premium on voting stock for Canadian firms based on TSE prices. Prices for both superior and inferior voting stock reflect traded shares. We focus on a recent comprehensive study by Smith and Amoako-Adu (1995), who examine the premium for 98 TSE firms from 1981-92.

For concreteness, we cast our results in terms of price-earnings ratios. To simplify matters, and to rule out the extreme effects of low earnings referred to earlier, suppose the prospect of future control change has *no* effect on earnings. This assumes no disciplinary effect of take-overs, that is, the prospect of a take-over does not induce more efficient management of the bank's resources. All the action is assumed to be the potential capture of synergy or consolidation benefits. This assumption tends to overstate the effect of take-over prospects on firm valuations, since it effectively implies that take-overs affect only prices and earnings.

Define the control premium as c percent of the price in the absence of a take-over. Then, the current price-earnings (P/E) ratio would be increased to P(1+c)/E. The percent control premium would equal the percent increase in the price-earnings ratio. As an illustrative example, let us take the case where the average trailing price-earnings ratios for the six largest US money centres equals 12 while that for the five largest Canadian banks is approximately 10. As detailed in our section on P/E ratios, time-series averages are extremely volatile and other numbers could well be justified. Our interest here is simply in whether such differences could be attributed to a control premium that is present in the US and absent in Canada. The difference in P/E ratios of 2 represents 20% of the average Canadian P/E ratio, so the control premium would have to be 20%.

This required premium of 20% is clearly large, but not impossibly so. Smith and Amoako-Adu (1995) report that superior voting stocks, on average, trade at a premium of 10.4% over comparable inferior voting stocks, increasing slightly over time. This number is computed using the ratio of actual trading prices for the two types of stocks. It is remarkably close to their direct estimate of the expected take-over premium of 11.7%, computed by deflating the premium paid for superior voting shares in the event of an actual take-over (57%) by the probability of acquisition (equal to 0.44 since 43 of the 98 sample firms were in fact taken over) and by the fact that superior voting shares received a larger premium only 47% of the time. Inferior voting shareholders received an equal premium in 53% of the cases because of "cottail provisions" and scrutiny of the courts and TSE which discouraged "unfair" treatment of limited voting stockholders (Maynes, 1996).

The above prospective take-over premia would clearly go quite some way towards erasing or even reversing any difference between Canadian and US banks' P/E ratios. In our example, Canadian Banks' P/E ratios would increase from 10 to 11.17. This extension, of course, requires some strong assumptions which arguably tend to understate the true effect. One such assumption, which is obviously inappropriate, is the deflation of the premium by the factor 0.47 reflecting the fact that inferior voting stocks received an equal premium 53% of the time. Canadian Bank stock under the 10% may have a much lower probability of receiving a takeover premium. If we assumed the probability was zero, the expected take-over premium more than

doubles to over 22%. This premium alone would suffice to push Canadian Banks' P/E ratios to 12.2, which would exceed those of the US even in periods where US banks enjoyed a historically large P/E premium.

This number is, however, almost certainly an overstatement. First, it assumes that take-overs of Canadian banks, if allowed, would involve approximately the same premia as those enjoyed by the average TSE firm with limited voting stock. The premium of 57% is certainly large in terms of the average Canadian firm as studied by Eckbo (1986). Of far greater importance, we suspect, is the assumed probability of take-over of 0.44. This number was computed using the fraction of Smith and Amoako-Adu's (1995) sample that was actually taken over. To extend this number to the big 5 Canadian Banks, it would have to be the case that at least 2 of them would be acquired.

Moreover, two key features of the Smith and Amoako-Adu (1995) study suggest a smaller take-over likelihood for Canadian Banks. The firms in their sample are tiny compared to the big 5 banks, with an average market value of equity less than $400 million. Moreover, Smith and Amoako-Adu (1995) find that the voting premium strongly falls as firm size increases, presumably due to the fact that larger firms are less likely to be take-over targets. The take-over premium directly decreases as the probability of such an take-over falls. In the limit, if the probability of take-over were zero there would be no premium.

Large Shareholder Monitoring

Shareholders do not need to sell to hostile bidders in order to influence management policy. They can exercise their voting rights to elect a new slate of directors, or even in some cases to recommend explicit actions be taken by managers (see DeAngelo and DeAngelo, 1989, for some instances). In principle, such actions could and occasionally do take place when shareholders are as dispersed as the 10% ownership limit implies (as with recent proposals to limit the compensation of bank executives). However, as originally pointed out by Berle and Means (1932), dispersed shareholders face severe collective choice problems in influencing management and some degree of shareholder concentration would seem to be a necessary, if not sufficient, condition for substantial influence over management.[15] Thus, the 10% ownership restriction is likely to suppress shareholders' ability to influence management. This section assesses the effects of such activism. Since, as Prowse (1997) documents, shareholder activism is relatively rare in US banks compared to other US firms, we will emphasise the large body of evidence on the effects of active shareholders in non-banks. The section concludes, however, with a revealing case of activism by a large shareholder in one of the major Australian banks. While general conclusions cannot be drawn from case studies, this case is, we feel, suggestive.

It is difficult, in general, to detect the influence of a large shareholder. Actual proxy battles are rare, and certainly understates the potential importance of "jawboning" and other informal means of affecting corporate policies. One way to avoid these difficulties is to study the market reaction to the emergence of a large shareholder, similar to studies of the effects of a take-over bid on

[15] Recent proposals to limit executive pay at the Royal Bank are more similar to the "nuisance actions" that small individual shareholders frequently undertake in the US; see Pound (1992).

target shareholder wealth. Wruck (1989) documents that the price reaction to the announcement of a large block purchase (above 5%) in US firms is strongly positive on average, although substantially smaller than the 20% or greater premium associated with a take-over bid. One interpretation of this finding is that the price response reflects the capitalised value of shareholder monitoring, that is, benefits that small shareholders will enjoy because of the presence of the larger shareholder. Unfortunately, this evidence can also be easily explained even if large shareholders perform no useful monitoring role. The accumulation of the large position may simply signal that the shares were undervalued. An explanation which occupies the middle ground between the pure signalling and the monitoring explanations is that the large shareholder was expected to mount a full take-over bid in the future. In this view, large shareholders per se still perform no useful monitoring role, and the only relevant effect of the 10% ownership limit is again on the chance of a full take-over.

Recent research has focused on the value effects of a class of large shareholders for whom the signalling or eventual take-over explanations are less tenable. The 1990's has seen the emergence of large institutional shareholders in many public companies. The largest and best-known of these shareholders are the major pension funds (see Leighton and Montgomery 1993 on the pension funds of Canada and the US). With the chilling of the corporate control market in the early 1990s, many sizeable institutional shareholders such as CalPERS have attempted, sometimes successfully, to affect corporate decisions (e.g., Pound, 1992). But those who would mount a challenge are at a severe disadvantage relative to management, not only in terms of their own knowledge of the corporation's real situation but also in terms of their ability to communicate with their fellow shareholders and to finance a campaign (Pound, 1991; Roe, 1990). Class action suits in the U.S. brought by shareholders are even less rewarding for the participants (Romano, 1991).

At present, large shareholders face enormous costs in influencing the behaviour of executives. While some commentators claim that this will change with the appearance of large pension funds and other potential 'relationship investors' able to exert a major influence over corporate policies (e.g., Taylor, 1990; Drucker, 1991), to date the evidence is mixed. Probably, this reflects the fundamental fact that while institutional investors have come to hold a substantial fraction of many firms' shares, the institutions are themselves large organisations and it is not at all clear that the managers of institutional funds will push corporate managers to maximise the wealth of the fund's beneficiaries.

A recent set of studies focuses directly on the value effects of activism by a set of large institutional shareholders who are publicly known to engage in campaigns to reform individual firms. Wahal (1996) and Karpoff and Malatesta (1996) together study shareholder activism covering the period 1986-1993 by a set of well-known large US shareholders, primarily: California Public Employees' Retirement System (CalPERS), The California State Teachers Retirement System, The New York City Employees Retirement System, and the Teachers Insurance and Annuity Association: College Retirement Equities Fund. Broadly speaking, activism takes two forms; proposals to change the board or other governance mechanisms, and resolutions based on perceived poor performance. These researchers find compelling evidence that either form of activism tends to take place in firms which have underperformed, when performance is judged by accounting, stock returns, or sales growth.

While the activist funds seem to have successfully identified underperformers, there is little evidence that activism brings on significant improvements in such performance. Wahal (1996) is unable to detect any systematic turn-around in stock price performance, and Karpoff, Malatesta and Walkling (1996) similarly find no major changes in operating profits, company policies, or the identity of top management. Smith (1996) presents somewhat more optimistic evidence for the case of CalPERs. Specifically, he finds that stock prices tend to improve for firms which adopt the shareholders' proposals, and to decline for those firms which resist. He is unable to detect any significant change in operating performance, but this could be attributed to the fact that the proposals are recent and he is therefore unable to trace effects for more than four years, on average. Garvey (1992) finds complementary evidence for institutional shareholdings overall. Specifically, he finds that the presence of a large shareholder has no effect on a company's decision to pay out excess cash flows to its shareholders. That is, large shareholder monitoring does not seem to drive firms to abandon unprofitable lines of business (see Morck, Shleifer and Vishny (1989) for evidence that outsider-dominated boards are similarly unable to change unprofitable policies).

Recent evidence from Canada produces results that are remarkably similar. Studies contained in Daniels and Morck (1996) confirm that there is little systematic relationship between either stock or accounting measures of performance and the presence or absence of large shareholders, or the structure of the board. These large-sample studies tend to focus on the TSE 300, and so paint an accurate picture of the largest Canadian firms, of which the major banks are certainly part.

A Case of Large Shareholder Activism in Australia

As the above subsection documents, there is little evidence that activist shareholders are able to improve the performance of firms in which they hold shares. Nonetheless, as Gilles and Morra (1997) stress, there are individual cases where activism has brought on both substantial operating and financial improvements. Van Nuys (1993) documents such improvements in the case of Honeywell instruments 1989-1990. The major pension funds played an important role in changing Honeywell's strategy, but, consistent with the larger-sample evidence, they only did so in a supporting role to a smaller but more vocal shareholder, American Equities.

A more revealing episode of shareholder activism occurred at one of the major Australian banks, Westpac, in late 1992 and early 1993. As the case has not to our knowledge been covered in the academic field, we will rely on reports that appeared in Australia's leading financial newspaper, the Australian Financial Review supplemented by our own analysis. Westpac had been the worst performer of the four major Australian Banks over the early 1990's. In January 1992, Australia's largest institutional investor, a pension fund named the Australian Provident Mutual Society (AMP,) secured a 15% shareholding in Westpac as part of a "strategic alliance" intended to improve Westpac's flagging performance. Under Australian Banking regulations, shareholdings above 10% and up 15% are allowable only if the federal Treasurer deems to merger not to be counter to the national interest.

Westpac's performance surrounding the AMP's emergence as a major shareholder is an exaggerated version of the pattern documented by Wahal (1996) and Karpoff, Malatesta and Walkling (1996). Chart 2 summarises Westpac's raw stock price performance from January of

1992 to December 1994. Westpac had been underpeforming before the AMP's investment, and as Chart 2 shows, it continued to produce negative returns through much of 1992. Thus, the emergence of the AMP did not even return Westpac's stock to normal performance. Rather, the cumulative abnormal return from January 1 to November 1992 was -51% on an annual basis[16]

While the emergence of AMP's shareholding did little to curtail Westpac's slide, Chart 2 indicates a rebound in performance beginning in mid-to-late November of 1992 after the price reached a nine-year low of $2.40. This rebound was not due to any major strategic change precipitated by AMP, but rather by the revelation that 8.27% of its shares had been accumulated by Consolidated Press, a company controlled by Mr. Kerry Packer. Mr. Packer was and continues to be the wealthiest individual in Australia and had enjoyed a string of successful investments. Furthermore, the managing director of Consolidated Press at the time was Mr. Al Dunlap, whose nickname "Chainsaw" was based on his record of radically downsizing both employment and assets in underperforming companies.[17] Westpac was widely acknowledged as a firm which suffered from both overstaffing and lack of focus and so was regarded as a prime target for such restructuring. Consistent with this view, Westpac enjoyed statistically significant positive abnormal returns on November 24 and 25, the days when Packer's stake became public knowledge. In the three days surrounding the announcement, Westpac shareholders enjoyed a raw abnormal return of 6.5%, which would translate to a gain of almost 800% over the market if it were sustained over a full year.

On December 8, 1992, Packer and Dunlap accepted invitations to join the board at Westpac. As reported by Boyd (1992):

> "Westpac in October launched a programme aimed at achieving annualised cost and revenue improvements of $300 million by September 1993 and slashing assets by $10 billion by 1995. But analysts and sources close to Mr. Packer believed the two new directors would bring their influence to bear to accelerate that programme and step up its intensity.
>
> Mr. Dunlap, who is nicknamed "Chainsaw" and who successfully slashed costs and sold more than enough assets at Consolidated Press to fund Mr. Packer's $500 million investment in the bank, is said to have done work on cutting costs at Westpac, particularly in middle management."

It is critical to note that at this point Mr. Packer encountered two major regulations. First, he would need approval to lift his shareholdings significantly since he would encounter the 10% ceiling. Second, the Reserve Bank of Australia's prudential guidelines state that individual bank shareholders are allowed only two directors on boards of more than seven. These restrictions had, however, been relaxed for the AMP who had both a 15% shareholding and four board seats.

---

[16] Abnormal returns are computed daily as the difference between Westpac's actual return and its expected return which is set equal to the interbank loans rate (risk-free rate) plus a risk premium equal to 1.045 (Westpac's *Beta* computed over the period 1990-1996) times the difference between the risk-free rate and the return on the Australian All Ordinaries Index.

[17] Mr. Dunlap subsequently departed from Consolidated Press to take the CEO position at the US manufacturer Sunbeam and undertake a highly-publicized reduction in its labor force and asset base.

It was widely acknowledged, however, that Consolidated Press was much less likely to win approval for any such increases since the AMP was a widely held financial institution while Consolidated Press was controlled by Mr. Packer.

At the beginning of 1993, it appeared that Consolidated Press would exert a substantial influence over Westpac's future restructuring, even given the restrictions imposed by regulation. Cumulative abnormal returns from November 20 1992 to January 1, 1993 were 8.1% or 91% on an annual basis. At the board meeting on January 14, there was an attempt to have Mr. Dunlap appointed to head a "restructuring committee" and to seek the resignation of Mr. Uhrig. This attempt failed and both Packer and Dunlap resigned from the board on the same day, and Westpac stock exhibited an abnormal negative return of over 5%, which is statistically significant. The importance of ownership and board seat restrictions to this failure are not clear. It is certainly possible that Mr. Uhrig and the rest of the Westpac board would have been more amenable to the wishes of their two new directors if Consolidated Press were able to increase its voting power.

On the other hand, Mr. Packer was better known as a shrewd investor than as a shareholder activist. Subsequent events provide some support for the view that his intent was to initiate the prospect of change and profit from the resulting stock price increases. By mid-March 1993, it was public knowledge that Mr. Packer was seeking to sell Consolidated Press' holding in Westpac. If it were simply the case that Mr. Packer was a frustrated would-be activist and Westpac would return to its "old ways" once he departed, the stock price should have plunged on the knowledge of Mr. Packer's imminent exit. In fact, there was no significant abnormal return in the period surrounding the announcement on May 12, 1993 that Lend Lease Corporation, a large financial conglomerate, had purchased Mr. Packer's entire shareholding. Confirming the view that shareholding restrictions were harsher for tightly held firms, Lend Lease had already secured permission to lift its holdings to 15% if it so desired.

Whatever personal frustrations Mr. Packer may have felt at selling out, both he and Westpac shareholders profited handsomely. Shareholders received a positive cumulative abnormal return of 9.5% over the troubled period from January 9 to May 15, and a cumulative abnormal return of 32% over the entire period of Packer's involvement, November 1992 to end of May 1993. It would also be a mistake to attribute the price rise to market sentiment or manipulation. In late 1993 Westpac underwent major organisational changes and appointed a new U.S. born CEO, Bob Joss. As Chart 1 suggests, Westpac made up its lost ground by the middle of 1994.

This pattern of events, in which a dissident shareholder's specific plans are frustrated but the company undertakes major reforms shortly thereafter, has also been observed in U.S. industrial companies (eg., Van Nuys, 1993). We cannot, however, conclude that ownership limits have no effect, for the simple reason that we do not know how many more firms would have experienced such "wake-up calls" if shareholdings were less restricted.

Conclusions

This report examines the effect of ownership restrictions on the market value and cost of capital for schedule A Canadian Banks. We do not find direct evidence of gross undervaluation or of seriously inflated capital costs. Specifically, we find that (a) price/earnings ratios of Canadian and comparable US banks are essentially indistinguishable over the long-run and (b) we found no evidence that Canadian Bank shares trade in a segmented market. We do *not* conclude that ownership restrictions are irrelevant. Ownership restrictions are only one of a large number of factors that affect the value of Canadian Banks. Even in theory, the linkage between price-earnings ratios and the value effect of ownership restrictions is quite tenuous. Furthermore, actual bank price-earnings ratios are extremely sensitive to periods of low or negative earnings which have no bearing on the issue of ownership restrictions. Similarly, our estimate of the cost of capital is unable to reject the hypothesis that Canadian bank shares trade in an integrated market. None of this evidence rules out the possibility that relaxing ownership restrictions would improve the future cash-flows, and therefore increase the current market value, of the major Canadian Banks.

To assess the cash-flow consequences of ownership restrictions, we focus on two closely related channels; merger prospects and the value of voting rights. We present evidence that ownership restrictions could significantly depress bank prices by impeding mergers and takeovers. There is an important qualifier to this, however. Impediments to takeovers are particularly likely to depress market values for banks which are merger targets rather than potential acquirers. This conclusion is buttressed by a study of recent proposed changes to merger regulation in Australia. Specifically, the rejection of a proposed liberalisation of bank merger policy had no effect on the stock price of the National Australia Bank, which was known to be an aggressive acquirer. There was, however, a significant negative effect on the price of the National Australia Bank's two potential targets.

We also provide Canadian evidence on the size of the "control premium". Since take-overs are typically motivated by control of the firm, they are essentially purchases of votes. We compute some direct estimates of the value of a vote, based on the premium observed for superior voting stock on the Toronto Stock Exchange. We conclude that the typical premium for industrial firms could be as large as 10%. Again, this conclusion relates to banks that are likely to be absorbed by other banks rather than vice versa.

Ownership restrictions not only impede mergers and takeovers, they also reduce the ability of shareholders to exercise direct voice in the running of the banks. We summarise evidence from the US that such shareholders do not, on average, exert a substantial effect on firm value. However, there are important cases in which a large and vocal shareholder has triggered needed changes. We present a case, previously covered only in the local business press, where an individual had just this effect on a major Australian bank in the early 1990's, and indicate how he might have been impeded by the ownership restrictions that apply in that country.

References

Allen, L. and A. Cebenoyan (1991) "Bank Acquisitions and Ownership Structure: Theory and Evidence" *Journal of Banking and Finance* 15, 425-48

Berger, P. and E. Ofek (1996) "Bustup Take-overs of Value-Destroying Diversified Firms" *Journal of Finance* 51, 1175-1201.

Berle, A. and G. C. Means (1932) *The Modern Corporation and Private Property*, Macmillan, New York.

Boyd, A. (1992) "Packer and Dunlap Take Board Seats at Westpac" *Australian Financial Review*, December 8, 26.

Comment, R. and G. W. Schwert (1995) "Poison or placebo? Evidence on the deterrence and wealth effects of modern antitake-over measures", *Journal of Financial Economics* 39, 3-43.

Cornett, M. and S. De (1991) "Common Stock Returns in Corporate Take-over Bids: Evidence from Interstate Bank Mergers" *Journal of Banking and Finance* 15, 273-95.

Cleghorn, J. (1998) "The Case for the Big Bank merger: Royal and Montreal", *Canadian Speeches* 11, 14-20.

Crane, D. (1998), "Our Banks Need Mergers, Top US Analyst Argues", *Toronto Star*, May 13, 1998, Business Section Edition 1.

Daniels, R. and R. Morck (1996) *Corporate Decision-Making in Canada*

DeAngelo, H. and L. DeAngelo (1989) "Proxy contests and the governance of publicly held corporations" *Journal of Financial Economics*, 23, 29–59.

Doukas, J. and N. Travlos (1988) "The Effect of Corporate Multinationalism on Shareholders' Wealth: Evidence from International Acquisitions" *Journal of Finance* 43, 1161-75.

Eckbo, B.E. (1986) "Mergers and the Market for Corporate Control: The Canadian Evidence", *Canadian Journal of Economics* 47, 236-60.

Fama, E. and K. French (1992) "The Cross-Section of Expected Stock Returns", *Journal of Finance* 47, 427-65.

Fama, E. and K. French (1997) "Industry Costs of Equity", *Journal of Financial Economics* 43, 153-94.

Fama, E. and J. MacBeth (1973) "Risk, Return, and Equilibrium: Empirical Tests", *Journal of Political Economy* 81, 607-36.

Garvey, G. T. (1992) "Do Concentrated Shareholdings Mitigate the Agency Problem of "Free Cash Flow"? Some Evidence", *International Review of Economics and Finance* 1, 347-69.

Gilles, J. and D. Morra (1997) "Does Corporate Governance Matter?", *Business Quarterly*, Spring, 71-77.

Gray, J. (1997) "Bank wars: NAB versus the rest" *Australian Financial Review*, May 23, 17.

Hudgins, S. and B. Seifert (1996) "Stockholder Returns and International Acquisitions of Financial Firms: The case of Banking" *Journal of Financial Services Research* 10, 163-80.

Jorion, P., and E. S. Schwartz (1986) "Integration vs. Segmentation in the Canadian Stock Market, *Journal of Finance* 41, 603-21.

Karpoff, J., P. Malatesta and R. Walkling (1996) "Corporate Governance and Shareholder Inititatives: Empirical Evidence", *Journal of Financial Economics* 42, 365-95.

Leighton, D. and K. Montgomery (1993) "The Unseen Revolution is Here", *Business Quarterly* 58,1, 39-48.

Maynes. E. (1996) "Take-over Rights and the Value of Restricted Shares" *Journal of Financial Research* 19, 157-73.

Morck, R., A. Shleifer, and R. Vishny (1990) "Do Managerial Objectives Drive Bad Acquisitions?" *Journal of Finance* 45, 31-48.

Morck, R., A. Shleifer, and R. Vishny (1989) "Alternative Mechanisms for Corporate Control" *American Economic Review* 79, 842-52.

Pound, J. (1991) "Proxy voting and the SEC", *Journal of Financial Economics*, 29, 241–85.

Prowse, S. (1997) "Corporate Control in Commercial Banks" *Journal of Financial Research*, forthcoming

Roe, M. (1990) "Political and legal restraints on ownership and control of public companies" *Journal of Financial Economics*, 27, 7–41.

Romano, R., (1991) "The shareholder suit: Litigation without foundation?", *Journal of Law, Economics, and Organization*, 7, 55–88.

Smith, M.P. (1996) "Shareholder Activism by Institutional Investors: Evidence from CalPERS" *Journal of Finance* 51, 227-53.

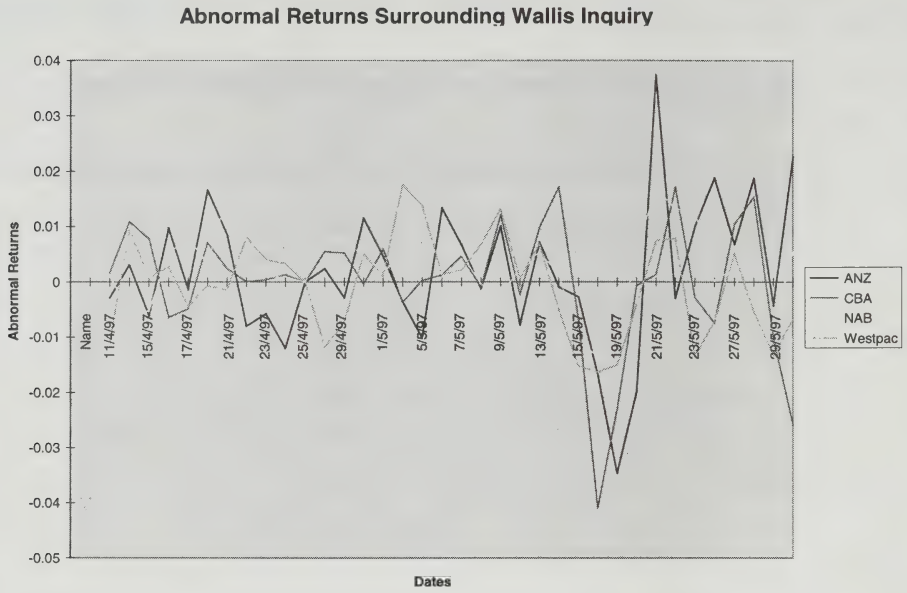
Smith, B. and B. Amoako-Adu (1995) "Relative Prices of Dual-Class Shares", *Journal of Financial and Quantitative Analysis* 30, 223-39.

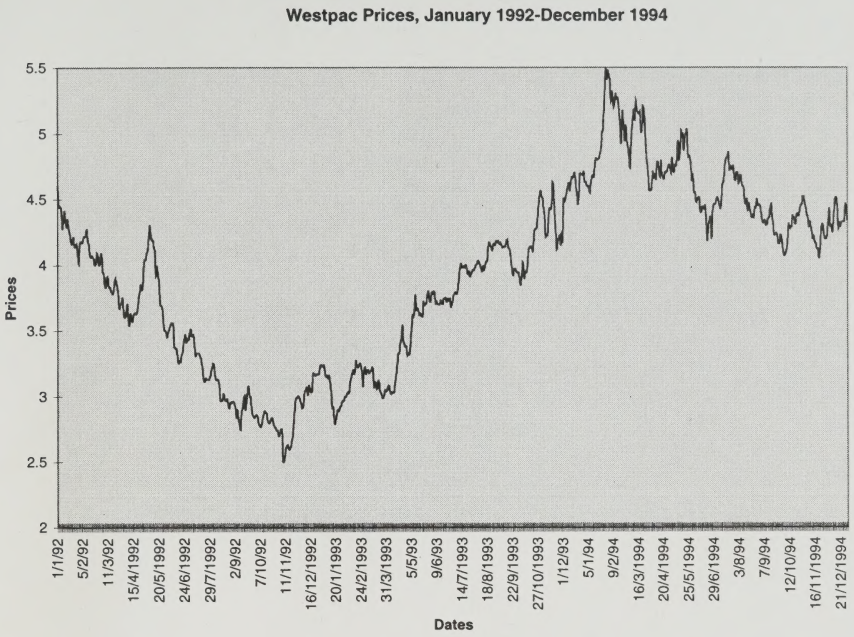
Van Nuys, K. (1993) "Corporate Governance Through the Proxy Process: Evidence from the 1989 Honeywell proxy solicitation", *Journal of Financial Economics* 34, 101-132

Wahal, S. (1996) "Pension Fund Activism and Firm Performance" *Journal of Financial and Quantitative Analysis* 31, 105-40.

Waheed, A. and I. Mathur (1995) "Wealth Effects of Expansion by US Banks" *Journal of Banking and Finance* 19, 823-42.

Wruck, K.H. (1989) "Equity Ownership Concentration and Firm Value" *Journal of Financial Economics* 20, 25-59.


Abnormal Returns Surrounding Wallis Inquiry
Abnormal Returns
0.04
0.03
0.02
0.01
0
-0.01
-0.02
-0.03
-0.04
-0.05
Name
11/4/97
15/4/97
17/4/97
21/4/97
23/4/97
25/4/97
29/4/97
1/5/97
5/5/97
7/5/97
9/5/97
13/5/97
15/5/97
19/5/97
21/5/97
23/5/97
27/5/97
29/5/97
Dates
ANZ
CBA
NAB
Westpac


Westpac Prices, January 1992-December 1994
Prices
5.5
5
4.5
4
3.5
3
2.5
2
1/1/92
5/2/92
11/3/92
15/4/1992
20/5/1992
24/6/1992
29/7/1992
2/9/92
7/10/92
11/11/92
16/12/1992
20/1/1993
24/2/1993
31/3/1993
5/5/93
9/6/93
14/7/1993
18/8/1993
22/9/1993
27/10/1993
1/12/93
5/1/94
9/2/94
16/3/1994
20/4/1994
25/5/1994
29/6/1994
3/8/94
7/9/94
12/10/94
16/11/1994
21/12/1994
Dates